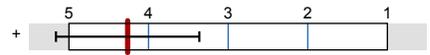


California Polytechnic State University

Schwartz, Peter  
Spring 2017PHYS-141 05 General Physics IA (PHYS-141-05-2174)  
No. of responses = 40 out of 68 - 58.82 %

## Overall indicators

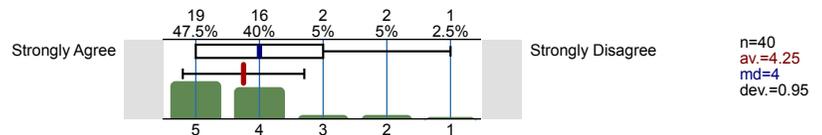
Summary Evaluation Average (2.1 &amp; 2.2)

av.=4.26  
dev.=0.9

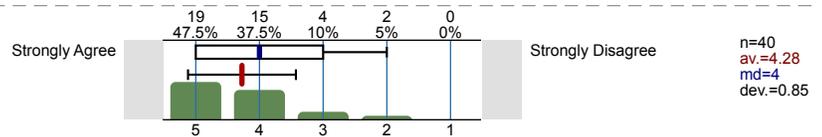
## Survey Results

## 2. Summary Evaluation

2.1) Overall, this instructor was educationally effective.



2.2) Overall, this course was educationally effective.



## Comments Report

## 1. Instructor Evaluation

- 1.1) Write any comments below that might help your instructor evaluate his/her teaching performance. What did you particularly like? What improvements could you suggest?
- As a whole, I do not really think that I liked the composition of the class. I think, even now at the end of the year, that I would have preferred to have been taught in the traditional setting, where we did not follow the "lens" of physics, and describe what is happening. While I agree that this class has led me to have a much better understanding of physics, I feel like I am at a disadvantage when compared to other students who have taken traditional physics classes. In some areas, I feel as though kids in these classes actually understand the physics better than I do. However, I did like the fact that we have videos online. This allowed for us to study for midterms (and the final) much more effectively and allowed me to revisit a concept if I did not understand it. If I were to suggest improvements, it would be for there to be more of a connection between the four lenses. In many instances, there are a definite instances where two or more lenses could be applied to a situation. I wish I understood this more, or had more of a background on it.
  - At first I thought Schwartz was crazy and that his teaching style was either going to be less effective or require a lot more outside work, yet halfway through the course I learned to embrace his teaching style and found it to be equally as effective as a normal physics lecture. I would have appreciated if his website was a little more organized, just to go back through to make finding older videos easier, however I don't really know of a way for him to do this so would not consider this in my overall impression of the class.
  - Gave some important life lessons mixed with physics, best teacher I've ever had at poly. Learned more about the concepts of physics than how to just find a final answer
  - He is a very good instructor when it comes to demonstrations, these are very effective in conveying the course material and getting students to understand physics. Inside the classroom, I wish he would help his students more but then again that is his structure of the class.
  - I appreciate that I'm able to understand what I'm doing versus simply plugging in numbers into formulas. I also appreciate the videos, but sometimes, and only sometimes, I wish I had some lecture during class. Discussion is great, but maybe a mix of lecture / discussion could also work.
  - I did not like the order at which the class was taught in. Most people were confused half the time and lecture was pointless to go to since he would just have us talk to our groups. He expects us to know a lot that he hasn't taught us. It kind of feels like we are more of his experiment with the reverse classroom versus his students. Waste of my money and time especially since this is my second time taking this class after intentionally failing it last quarter because I did not understand anything being taught. This class left me even more confused than before.
  - I enjoyed the activities in class and how Pete asked questions in order for us as a class to figure out a problem, however there were times where some old fashioned lecturing would've been useful.
  - I enjoyed this learning environment much more than a normal lecture based physics class. I felt more involved in class discussions and by working with peers, I can learn and then teach the curriculum, further deepening my understanding of the material. All classes should start moving toward this learning model which will benefit the active student.
  - I had never taken physics before this class. I had only a vague idea of what physics was before this class which mainly involved rockets. This class taught me to see physics in every part of my life and I love that. Pete, keep doing what you're doing.
  - I like the way the class was taught. I had not prior knowledge of physics so I had no expectations that got in the way of me learning in the flipped-classroom environment. I really liked all the examples of physics my instructor would do in class. He would just throw things around the room or jump onto the desk or fling projectiles.
  - I liked his class, but it may not be helpful for freshmen and sophomores.
  - I liked that he is trying a new way to teach the class by introducing all four lenses at once rather than go through one at a time. It does make sense to teach it this way so at the end of the year we know how to use all the lenses instead of the most recent one we've learned. It was a bit hard at times because it seems that he thinks that everyone has at least a little bit of a background in physics, as I have none. He likes students to be engaged and not only think linearly about the problem but in several different ways. I think it would be better for him to teach a higher level physics class because those students would understand what he's saying better/easier. His overall enthusiasm for physics and for his students helped me to succeed in his class.
  - I liked the way you have been creating your own teaching method, it is especially helpful when you bring things to demonstrate what we are learning.  
The only thing I would ask is for you to give more time lecturing or explaining material in class than the time you give us to talk among us.
  - I loved learning Physics in this new way, lenses helped me understand so much and I am very grateful for all that Professor Schwartz has done in order to teach us in a more productive and beneficial manner. If I had any suggestions it would be to keep teaching in the way the you are and try to make this a more widely used learning model.
  - I personally did not like this classroom style. I feel like I could've done better in a traditional physics class. This class had way too much workload outside of the classroom, and we didn't really do anything during class time. Also, I wished that he counted homework, big exams, and projects for our grade because we spent a lot of time on those. His midterms were also really hard and took too much time.

- I really enjoyed the set up of the class. I honestly don't know how you would improve the class.
  - I really like this teaching style
  - I really loved the way this class was taught. The style was flipped, so we did most of the practice in class, but even so I feel like most of the learning was done in class. I've taken physics in high school but Professor Schwartz cleared so many things up for me. I love when my classes get me to see the world in new ways, and this one did. I think that teaching us to rely on what we know and what we can explain to solve problems is way more useful than relying on formulae and numbers. This class sharpened my mind and critical thinking skills.
- The only change I would recommend is to revamp some of the teaching videos on the class website; some of them are hard to follow and confusing.
- I very much like the style of the grading for this course, and how there is more value on understanding the concepts rather than just getting the right answer. However, I hardly ever did the assigned homework because it did not affect the grade. I probably would have done better in this course if there had been more repercussions.
  - I was worried about this class coming in but ended up really enjoying the learning style. I liked that I could go back and rewind your online lectures if I missed something, and I like being able to talk amongst my peers. It was very helpful to learn from other students. The problems we did in class were also really helpful. But man your problem sets are hard. Like holy crap some of that homework was impossible, especially at the end. Also, I hate the problems you gave out with no numbers that were entirely conceptual. It's not that I wanted numbers to plug into an equation (I preferred your way of understanding the problem rather than using equations I feel like I got a lot more out of your class that way), but I wanted to be able to visualize the problem. I couldn't visualize it if I didn't have weights or lengths or speeds to think about. But ya I learned a lot from your class, but mostly my peers. Your teaching style proved effective for me and most of the people I talked to and I hope I have more courses here at poly just like this one.
  - I went into this class very nervous about this professor's learning style. However as we approach the end of the quarter I kind of enjoyed his methods of teaching. Although I would not say it was my favorite way to learn the material. I did REALLY enjoy being able to talk to my peers and work out problems together every class. I do wish homework was required/we got a couple points for it because I think it would motivate students to stay more on top of the material throughout the quarter instead of cramming a few days before the midterms/final.
  - I would like more in class teaching, the videos were hard for me to learn from. I liked the energy and humor you brought, and I loved the encouragement to engage with my peers in class.
  - It took me a few weeks to adjust to the teaching style of this class, but I started to enjoy it once I got used to it. I enjoyed that we had to understand why we were doing what we were doing, not just plugging in numbers to a formula. I would suggest that it be made more clear that you will personally help students in office hours, as for a while it felt like if I went, you would just send me to a group who happened to be there, who might not be very helpful. I would also recommend having students switch up their groups every so often, as the group I started with at the beginning was not very interested in the course, so I didn't really have anyone to talk to about problems, but felt I couldn't switch groups because everyone had already found theirs.
  - More organization. Collecting hw.
  - Not the biggest fan of his reversed style classroom. Some people like it, but I like a traditional classroom setting. That being said, Peter is super involved in the success of his students, and does his best to make the class easy for everyone. He's also super approachable and the most down to earth professor I've had at Cal Poly.
  - Overall, I enjoyed the flipped classroom model. However, I felt that the option to have subtitles on the lecture videos was something that I personally felt was missing. (For reference, there are no proper subtitles available on any of the videos.)
  - Pete had a passion for physics. However, his teaching style hinders the learning process for students. He is very disorganized and unclear about expectations.
  - Some of the videos were hard to follow and there were points in the class where I could not distinguish what was happening. However, professor Schwartz is one of the most passionate professors I have ever had. It is really amazing when he teaches because he teaches with great accuracy and gets the class excited about physics. His reversed setup did not help me very much because I would be more confused after watching the videos and talking to other people. However, when he taught in class, he was one of the best teachers I've had.
  - Teaches physics unconventionally but nevertheless is a good professor.
  - The videos are somewhat helpful at times. I wish they went into more detail and depth with the explanation of each concept. I hate veritassium videos. I enjoyed watching the video of the professor swinging his daughter by the ankles. I like that Pete tests students on content rather than equations. It motivates me to better understand physics concepts rather than to stress over how to approach equations. I don't like doing projects.
  - When I crashed this course this quarter, I initially was not sure what to expect. I have never been a fan of flipped courses and wasn't sure what to expect. However, after taking this course I found that this type of education can be very beneficial. I failed PHYS-141 last quarter and after taking this course, I feel like I understand the material better as a whole. I would recommend professor Schwartz to anyone for any class. He was educationally effective and made learning physics much easier compared to many other professors.
  - While the out of class videos were extremely helpful, I felt that the videos were more supplemental. I felt I learned more when Schwartz was lecturing and adapting to our needs on the fly. But other than that, the course was fun and educational.
  - Wow. What can I say about Pete? Honestly, I was apprehensive in taking this class when I first got the e-mail that this class was going to be taught using a "flip" method. I had previously taken physics before so it was normal for me to feel that way since this was a brand new

teaching style I was to encounter. I have never, in academic career, been more impressed, captivated, and challenged until taking this class. Pete taught me that there are 4 essential lenses that you can look at mechanics through which are dynamics, energy, kinematics, and momentum. Learning to apply the lenses to a physics problem was not too bad but trying to defend your reasoning, that was hard. I think that is why I enjoyed this class a whole bunch; instead of plugging and chugging numbers into equations, I got to actually think about what was happening in a system. I think that the majority of physics classes miss the opportunity to teach critical thinking and instead go with formulas and numbers since there is a lot of material to cover and it is what the majority of STEM classes are like. I think that Pete has a very good system set up. I would like to say that I would perhaps tweak his office hours approach. I understand that we are supposed to ask our peers for help but most of the time, they were as lost or even more lost than me and I would have appreciated him taking the reigns and giving me an example of talking through a problem so that I may follow and then attempt it on my own/ with my classmate(s). I liked that the class was Monday through Thursday as it helped build relationships with the classmates around me. It felt as if I had a big physics family which was beneficial because it was easy to work with people on projects and group activities as well as it kept the classroom lively and engaged. I think that Pete is a great professor and that his methods work. One final thought, maybe updating some of the videos that we watch on PlayPosit would be beneficial to future students as some videos can be intricate and/or long. Thank you for everything Pete. Your passion for physics and the natural world shines though and is inspiring.

- a few more mandatory practice things to help kids learn would be nice
- good teacher just help out the students more in office hours individually.
- i loved this class, the inverted learning style was a very interesting transition, but i believe it truly did help. i loved Pete as an instructor and hope to be able to take him again in the future. i believe that this course will help me in the oncoming classes in the series
- i think this is a tough class if you have never had physics before. Sometimes the jumps in logic were hard to follow when we were solving problems in class. I think it would have been nice to have some worksheets in class that we could collaborate on, but then go over and check right away. I really liked the demonstrations. It definitely made the concepts easier to grasp and remember later on